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HOW TO: Create Third-Party Microsoft Installer Package (MSI)

This article was previously published under Q257718

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- **♦ SUMMARY**
- Definitions
- ↓ Instruction File
- **♦Clean PC**

- How to Create a Third-Party MSI Package
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SUMMARY

This article describes how to create a Microsoft Installer Package (MSI) for installing third-party programs. If you want to install a third-party program by using this method, you must install a copy of Veritas Software Console by Seagate Software at a location that is accessible by the reference computer. This program is available on the Windows 2000 CD-ROM in Valueadd\3rdparty\Mgmt\Winstle\Swiadmle.msi. This includes a copy of WinINSTALL limited edition, which allows for basic functionality.

Definitions

Instruction File

An instruction file (Microsoft Installer package) contains information about what needs to be done to install a product.

Clean PC

A clean PC is defined as a computer with only the following items on it before you run Discover:

- · The operating system
- The service packs for the operating system

If you install Veritas Software Console (or any other product) on the computer, it is by definition no longer a clean PC. You must install Veritas Software Console somewhere, but not on the clean PC.

Reference Computer

A clean PC ensures that the Discover program will pick up all files and registry entries necessary for the program to run.

The reference computer should have access to the Discover program (Discoz.exe) in the Winstall folder from My Network Places, Windows Explorer, or the **Run** command on the **Start** menu. Do not map a drive to the Winstall share. Doing so may cause Discover to pick up the added drive, possibly causing problems in your Microsoft Installer packages.

Discover

The Discover program is the program you use to create the instruction file (Microsoft Installer package) that contains information about what needs to be done to install a product.

How to Create a Third-Party MSI Package

For this process to work properly, you should start with a clean PC.

- 1. Start with a clean PC, or one that is representative of the computers in your network.
- 2. Start Discover to take a picture of the representative PC's software configuration. This is the Before snapshot.
- 3. Install a program on the PC on which you took the Before snapshot.
- 4. Reboot the PC.
- 5. Run the new program to verify that it works.
- 6. Quit the program.
- 7. Start Discover and take an After snapshot of the PC's new configuration. Discover compares the Before and

the After snapshots and notes the changes. It creates a Microsoft Installer package with information about how to install that program on such a PC in the future.

- 8. (Optional) Use Veritas Software Console to customize the Microsoft Installer package.
- 9. Clean the reference computer to prepare to run Discover again.
- 10. (Optional) Perform a test installation of the program on non-production workstations.

To obtain support for Veritas Software Console, please contact Veritas.

REFERENCES

For more detailed step-by-step instructions, visit the following Web site:

http://www.microsoft.com/technet/prodtechnol/windows2000serv/howto/winstall.mspx (http://www.microsoft.com/technet/prodtechnol/windows2000serv/howto/winstall.mspx)

This link is contained in the following document that describes the basic technology and compares competing products:

http://www.microsoft.com/technet/prodtechnol/windows2000serv/maintain/featusability/inmnwp.mspx (http://www.microsoft.com/technet/prodtechnol/windows2000serv/maintain/featusability/inmnwp.mspx)

For a detailed description of the technology, consult the "Microsoft Windows 2000 Server Deployment Planning Guide," which is one of the volumes included with the Microsoft Windows 2000 Server Resource Kit.

For detailed information, consult the Microsoft Software Development Kit (SDK) at the following site:

http://msdn.microsoft.com/downloads/ (http://msdn.microsoft.com/downloads/)

For technical information about third-party products using MSI technology, see the following Web site:

http://www.installsite.org/ (http://www.installsite.org/)

Microsoft provides third-party contact information to help you find technical support. This contact information may change without notice. Microsoft does not guarantee the accuracy of this third-party contact information.

The third-party products that are discussed in this article are manufactured by companies that are independent of Microsoft. Microsoft makes no warranty, implied or otherwise, regarding the performance or reliability of these products.

APPLIES TO

- Microsoft Windows 2000 Server
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This article discusses various third-party tools you can use to repackage applications into MSI files so you can deploy them using Group Policy in your Windows 2000 or Windows Server 2003 enterprise environment. The article also includes helpful links to resources on Microsoft.com and third-party sites where you can find out more about repackaging applications and deploying them using Group Policy.



Windows Installer technology was introduced in the Windows 2000 platform to take some of the pain out of deploying and managing Windows applications across an enterprise. In previous versions of Windows (NT/9x), developers usually created installation packages using a variety of proprietary tools developed by third-party vendors such as InstallShield Software and Wise Solutions. To bring some kind of consistence to this situation, Microsoft included Windows Installer as a core service (msiexec.exe) within Windows 2000 to install, repair, and remove software based on instructions contained in .MSI files. These .MSI files are basically database files that contain all the information an application needs in order to install a packaged application. Then once you package your application you can deploy it using Group Policy by one of two methods:

- Assigning an application. You can assign a .MSI package to either a computer or a user. If you assign it to a computer, the packaged application installs the next time the computer reboots. If you assign it to a user, the application typically installs when the user tries to run it from the Start menu or tries to open a file that has a file extension associated with the application.
- Publishing an application. You can publish a .MSI package to users only. This provides the user with an option within Add or Remove Programs in Control Panel that lets them manually install the application if they want to.

Once Microsoft included Windows Installer technology in Windows 2000, they also made it their policy to include .MSI installation packages in all applications they developed for Windows. What they didn't include at the time was a tool of their own for repackaging traditional Setupbased applications into .MSI packages. Instead, Microsoft decided to include a "light" version of WinINSTALL called WinINSTALL LE (WinINSTALL Limited Edition) in the Valueadd folder on the Windows 2000 product CD. Administrators could then use WinINSTALL LE to repackage legacy applications into .MSI packages that could then be deployed using Group Policy. Microsoft apparently also decided to leave it to third-party vendors to develop full-featured .MSI packaging tools to meet the needs of customers who needed to deploy third-party and custom applications across their enterprise.

As a result of this decision, the marketplace has a number of competing .MSI packaging tools and .MSI authoring environments available at present, and the remainder of this article looks at three popular packaging tools that are available. Some of these tools are free while others are commercial products with varied pricing and licensing requirements, check out their websites for details. Using any of these tools can make your life easier as an administrator of a large, Windowsbased network, since they save you the time of having to visit desktops to install the applications that make your business work.

Advanced Installer

The free version of Advanced Installer from Aphyon is powerful and easy to use, but if you want to get into advanced packaging tricks like setting attributes, installing .NET assemblies, installing ODBC drivers and so on, then you'll need to opt for the more powerful Professional version instead. Aphyon also provides optional features through add-ons that can be purchased extra. One cool feature of Advanced Installer is that it stores its Windows Installer project files in XML format. This simplifies versioning of packages you're developing and lets you keep track of packages using a version control system. Another feature of Advanced Installer is that you can perform most actions from the command line. This allows you to automate application packaging using scripts, something that can be useful if you have a large enterprise with many applications to deploy. The current version of Advanced Installer is version 2.3 and you can download it here for Windows 2000/XP platforms.

WinINSTALL MSI Packager

WinINSTALL MSI Packager from Software OnDemand is a tool from the same evolutionary line that produced WinINSTALL LE discussed previously. Because of this heritage, WinINSTALL MSI Packager is a popular .MSI packaging tool today in many enterprise environments. Not only can the tool be used to easily package applications for deployment, it also lets you test them against standards like the Microsoft Logo Certification. This ensures your packaged applications will install properly on the latest Windows operating systems. The current version of WinINSTALL MSI Packager is version 8.6 and you can download an evaluation version of this software here. Software OnDemand also has two other tools you may want to look at: the upscale WinINSTALL 8.6 full product that lets you not only deploy applications but also manage them, and WinINSTALL LE 2003 which is the latest incarnation of the free "light" version that was included on the Windows 2000 product CD.

Wise for Windows Installer

Wise for Windows Installer from Wise Solutions Inc. is another application packaging tool that is popular in some enterprise environments. This tool fully complies with Microsoft's .MSI standards while also extending the capabilities of .MSI packages without making changes to their native format. The result is a powerful tool that can be used to deploy legacy, Web-based, and .NET applications quickly and easily. Enterprises that make heavy use of Microsoft SQL Server for back-end databases and Internet Information Services (IIS) 5.0 or 6.0 for front-end Web applications should take a close look at this product. If all you want to do is package applications into .MSI format, this tool is so easy and intuitive to use you hardly need a manual. Wise for Windows Installer comes in several editions including Standard, Professional, and Enterprise editions to meet your deployment needs according to your budget. Wise for Windows Installer is also part of a larger family of Wise

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Solutions products that includes <u>Wise Package Studio</u> and <u>Wise Installation System 9.0</u>.

Additional Resources

Finally, there are a number of other resources you may want to look at when you consider which packaging solution to choose for deploying applications across your enterprise. These resources include the following:

Articles about Windows Installer and .MSI packaging in the <u>Knowledge</u> <u>Base</u> on Microsoft TechNet. Some key articles include:

- 310598 Overview of the Windows Installer Technology
- 816102 HOW TO: Use Group Policy to Remotely Install Software in Windows Server 2003
- 257718 HOW TO: Create Third-Party Microsoft Installer Package (MSI)

Articles on myITforum.com, a popular site run by Windows management technologies guru Rod Trent. Here you'll find an active community of IT professionals who regularly contribute articles on topics like Microsoft Systems Management Server (SMS), Microsoft Operations Manager (MOM), patch management, MSI packaging, Wise Solutions products, and more. There are also some active forums where you can post questions and have top experts in the field provide you with answers.

The Microsoft Windows Desktop Deployment Resource Kit from Microsoft Press. I reviewed this book by Jerry Honeycutt previously on WindowsNetworking.com and it includes a terrific chapter on Software Installation (chapter 23) that provides an overview of Windows Installer technologies, package creation, working with transforms, elevating installation privileges, third-party distribution products, automating legacy installers, and more. I highly recommend this book as a must-have for administrators who deploy Windows operating systems and applications within enterprise environments, it's well-written and easy to read while also being comprehensive in depth.

About Mitch Tulloch

Mitch Tulloch is a writer, trainer and consultant specializing in Windows server operating systems, IIS administration, network troubleshooting, and security. He is the author of 15 books including the

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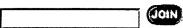
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₩ Windows Installer

About Windows Installer

To install your applications efficiently and reduce the total cost of ownership (TCO) for your customers, you can use the Windows® Installer. This section covers the major functional areas of the installer:

- Overview of Windows Installer
- Administrative Installation
- Rollback Installation
- Maintenance Installation
- Windows Installer File Extensions
- Command Line Options
- System Reboots
- System Policy
- Source Resiliency
- Windows File Protection on Windows 2000 and Windows XP
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Windows Installer

Merges and Transforms

The Windows® Installer keeps all information about the installation in a relational database. You can modify this database, and therefore the installation, by using transforms and merges.

Transforms

A <u>database transform</u> adds or replaces elements in the original database. For example, a transform can change all of the text in an application's user interface from French to English.

Primary uses for transforms include:

- Customization of base installation packages for particular groups of users.
 - Transforms can be used to encapsulate the various customizations of a single base package that are required by different groups of users. For example, this is useful in organizations where the finance and staff support departments require different installations of a particular product. A product's base package can be available to everyone at one administrative installation point with appropriate customizations distributed to each group of users separately.
- Synchronization of applications across languages.
 - Transforms are useful for keeping packages authored at widely separated locations synchronized during authoring. For example, if an upgrade is first developed for an English version of an application that exists in English and French, a transform can be applied to the upgraded English version that converts it into an upgraded French version.
 - Multiple transforms can be applied to a base package and then applied on-the-fly during installation. This extends the capabilities of the installer to create custom packages and provides a mechanism for efficiently assigning the most appropriate installations to different groups of users.
- Patching applications.
 - Transforms can be used to apply a minor fix to an application that does not warrant a major upgrade. For more information about patches, see <u>Patch Packages</u>.

Merges

A merge combines two databases into one database, and adds, rather than replaces, information. If the same information exists in both databases, a merge conflict occurs. Merges are useful to development teams because they allow a large application to be divided into parts that can be recombined later. For example, the database elements for the installation of a new component can be developed separately and later merged into the main installation database. For more information, see <u>Merge Modules</u>.

A development team might apply a merge operation in the following way:

- 1. Separate into groups and work simultaneously on different components of a large application.
- 2. Each development group then populates a database with installation information for its own component, without being concerned with the other components of the application.
- 3. After the development of a component is complete, that component's database can be merged into the main installation database for the entire application.

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Windows Installer

Merge Modules

Merge modules provide a standard method by which developers deliver shared Windows® Installer <u>components</u> and setup logic to their applications. Merge modules are used to deliver shared code, files, resources, registry entries, and setup logic to applications as a single compound file. Developers authoring new merge modules or using existing merge modules should follow the standard outlined in this section.

A merge module is similar in structure to a simplified Windows Installer .msi file. However, a merge module cannot be installed alone, it must be merged into an installation package using a merge tool. Developers wanting to use merge modules must obtain one of the freely distributed merge tools, such as Mergemod.dll, or purchase a merge tool from an independent software vendor. Developers can create new merge modules by using many of the same software tools used to create a Windows Installer installation package, such as the database table editor Orca provided with the Windows Installer SDK.

When a merge module is merged into the .msi file of an application, all the information and resources required to install the components delivered by the merge module are incorporated into the application's .msi file. The merge module is then no longer required to install these components and the merge module does not need to be accessible to a user. Because all the information needed to install the components is delivered as a single file, the use of merge modules can eliminate many instances of version conflicts, missing registry entries, and improperly installed files.

For more information about merge modules, see:

- About Merge Modules
- Using Merge Modules
- Merge Module Reference

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Windows Installer

Merge Module Database Tables

The following tables are required in a standard merge module.

Table name	Comment
Component	(REQUIRED)
Directory	(REQUIRED)
<u>FeatureComponents</u>	(REQUIRED)
<u>File</u>	(REQUIRED)
<u>ModuleSignature</u>	(REQUIRED) Merged into the installer database. Lists the information identifying a merge module.
<u>ModuleComponents</u>	(REQUIRED) Merged into the installer database. Lists all the components in the merge module.

The following tables only occur in merge modules or other installer databases that have already been combined with a merge module.

Table name	Comment
<u>ModuleDependency</u>	Merged into the installer database. Lists other merge modules required by this merge module.
ModuleExclusion	Merged into the installer database. Lists other merge modules that are incompatible with this merge module.

The following ModuleSequence tables only occur in merge modules.

Table name	Comment
<u>ModuleAdminUISequence</u>	Merges actions into the AdminUISequence table.
<u>ModuleAdminExecuteSequence</u>	Merges actions into the AdminExecuteSequence table.
<u>ModuleAdvtUISequence</u>	Do not use this table. For details, see AdvtUISequence table.
<u>ModuleAdvtExecuteSequence</u>	Merges actions into the <u>AdvtExecuteSequence table</u> .
<u>ModuleIgnoreTable</u>	Lists tables in the module that are not merged into the .msi file.
<u>ModuleInstallUISequence</u>	Merges actions into the <u>InstallUISequence table</u> .
<u>ModuleInstallExecuteSequence</u>	Merges actions into the <u>InstallExecuteSequence table</u> .

The following tables are required in every configurable merge module. Mergemod.dll version 2.0 or later is required to create configurable merge module. For details, see <u>Configurable Merge Modules</u>.

Table name	Comment
ModuleSubstitution Table	(REQUIRED) This table is not merged into the target installation database. Specifies the configurable fields in the target database and provides a template for the configuration of each field.

ModuleConfiguration Table

(REQUIRED) This table is not merged into the target installation database. Identifies the configurable attributes of the module.

The following installer tables cannot occur in a standard merge module.

BBControl

Billboard

CCPSearch

Error

<u>Feature</u>

LaunchCondition table

Media

Patch

<u>Upgrade</u>

The following installer tables are optional in merge modules.

ActionText

AdminExecuteSequence

<u>AdminUISequence</u>

<u>AdvtExecuteSequence</u>

<u>AdvtUISequence</u>

AppId

AppSearch

BindImage

CheckBox

Class

ComboBox

CompLocator

Control

ControlCondition

CreateFolder

CustomAction

Dialog

DrLocator

DuplicateFile

Environment

EventMapping

Extension

Font

<u>Icon</u>

<u>IniFile</u>

<u>IniLocator</u>

InstallExecuteSequence

<u>InstallUISequence</u>

<u>ListBox</u>

<u>ListView</u>

MIME

MoveFile

ODBCAttribute

ODBCDataSource

<u>ODBCDriver</u>

ODBCSourceAttribute

ODBCTranslator

ProgID Table

Property

PublishComponent

RadioButton

Registry Table

RegLocator

RemoveFile

RemoveIniFile

RemoveRegistry

ReserveCost

SelfReg

ServiceControl

<u>ServiceInstall</u>

Shortcut

Signature

<u>TextStyle</u>

TypeLib

<u>UIText</u>

<u>Verb</u>

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Windows Installer

Merge Module Summary Information Stream Reference

The following table identifies the properties for the summary information stream of the merge module. For more information, see <u>Summary Information Stream</u>.

Property	ID	PID	Туре	Description
Codepage	PID_CODEPAGE	1	VT_I2	Identifies the code page used to display the summary information.
<u>Title</u>	PID_TITLE	2	VT_LPSTR	"merge module".
Subject	PID_SUBJECT	3	VT_LPSTR	ProductName property.
<u>Author</u>	PID_AUTHOR	4	VT_LPSTR	Manufacturer property.
<u>Keywords</u>	PID_KEYWORDS	5	VT_LPSTR	MergeModule, MSI, database.
Comments	PID_COMMENTS	6	VT_LPSTR	Describes the merge module and its components.
<u>Template</u>	PID_TEMPLATE	7	VT_LPSTR	Platform and language versions supported by database. Required in every merge module. For more information, see <u>Template</u> for the syntax.
				A module that contains 64-bit components must have Intel64 or x64 set. For information, see Using 64-bit Merge Modules.
				Lists the numeric language identifiers for all languages supported by the module. The first language in the list is the default language of the module. Specifying more than one language results in a multilanguage merge.
<u>Last Saved</u> <u>By</u>	PID_LASTAUTHOR	8	VT_LPSTR	Specifies the platform and language of the patched database using the same syntax as the Template Summary property.
Revision Number	PID_REVNUMBER	9	VT_LPSTR	The unique GUID for this merge module. Required in every merge module.
<u>Last Printed</u>	PID_LASTPRINTED	11	VT_FILETIME	Null.
<u>Create</u> Time/Date	PID_CREATE_DTM	12	VT_FILETIME	The time and date when the installer database was created.
Last Saved Time/Date	PID_LASTSAVE_DTM	13	VT_FILETIME	Initially null. Each time a user changes an installation database the value is updated to the

				current system time/date at the time the merge database was saved.
<u>Page Count</u>	PID_PAGECOUNT	14	VT_I4	Minimum required installer version. Stored as an integer in the form: Major * 100 + minor. Required in every merge module.
Word Count	PID_WORDCOUNT	15	VT_I4	Enter 0 (zero) for this property. Note that in a merge module, files are always inside an embedded cabinet file regardless of the value of this property. Required in every merge module.
<u>Character</u> Count	PID_CHARCOUNT	16	VT_I4	Null.
Creating Application	PID_APPNAME	18	VT_LPSTR	Application used to create the installer database. Typically, the value is the name of the software used to author this merge module.
Security	PID_SECURITY	19	VT_I4	"2".

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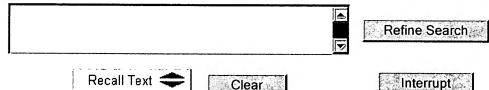
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Windows Installer 3.0

Posted September 24, 2004

Chat Date: September 23, 2004

Please note: Portions of this transcript have been edited for clarity

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Introduction

Moderator: Andy (Microsoft)

Welcome to today's chat. Our topic is Windows Installer 3.0. Questions,

comments, and suggestions are welcome.

Moderator: Andy (Microsoft)

I'll now have the hosts introduce themselves.

Host: KenWong (Microsoft)

Hi my name is Ken and I am a tester on the Windows Installer Team.

Host: asharma (Microsoft)

Hello! I'm Ashish, a tester on the Windows Installer team.

Host: Hem (Microsoft)

Hi, I am Hemchander. I am developer at the Windows Installer team.

Host: Chris (Microsoft)

Howdy! My name is Chris Gouge. I was a senior developer on the MSI team until

just recently and am filling in for the lovely and talented Carolyn today.

Host: Tyler (Microsoft)

My name is Tyler Robinson. I am the Program Manager for the Windows Installer

here at Microsoft. I look forward to talking with you today.

Host: OmSharma (Microsoft)

Hi - I am Om from the Windows Installer Program Management team

Moderator: Andy (Microsoft)

And I'm Andy Q, Communities producer

Start of Chat

Host: OmSharma (Microsoft)

Q: stern67 : Can I get Windows Installer 3.0 without SP2 for Win XP?

A: Windows Installer v3.0 has been released with XPSP2. The redistributable release for Win2k/SP3, Win2k/SP4, WinXP, WinXP/SP1 and Windows Server2003

is under development.

Host: Tyler (Microsoft)

Additionally, the Windows Installer 3.0 SDK is available as part of the Windows XP Service Pack 2 SDK at

http://www.microsoft.com/msdownload/platformsdk/sdkupdate/

Host: Tyler (Microsoft)

Q: when will the MSI 3 redistributable be released?

A: We do not yet have a release date for the Windows Installer 3.0 redistributable.

Host: Tyler (Microsoft)

Q: any approximate release time frame? Is it a matter of days, weeks, months...? **A:** We are working hard on the redistributable, but we do not have a timeframe to communicate at this point.

Host: Hem (Microsoft)

Q: Are there any plans for a MSI authoring tool (other than Orca) from MS? something similar to Wise?

A: Visual Studio helps you build MSI packages. WIX (Windows Installer XML) toolset is an open source toolset useful in authoring MSI packages. It is widely used within Microsoft. Here's where you will find information about it: http://sourceforge.net/projects/wix.

Host: asharma (Microsoft)

Q: Is there a mechanism to disable the installer from interacting with COM calls? Even temporarily?

A: No. But you can avoid this by using Registry table to register COM components.

Moderator: Andy (Microsoft)

For those new to the chat - Our topic is Windows Installer 3.0. We're about halfway in-keep those questions coming!

Host: Chris (Microsoft)

Q: Generally Windows installer applications will not allow a second installation of the same application. If you want to test a new release while keeping an old on you have to go to a different machine. Is this something that the user has any control over?

A: It depends on what you mean by "new release" if this is a new release with a different ProductCode, then you should be able to install it alongside your existing release from the MSI point of view (how well the app itself handles this depends on your implementation of the product.) If this is a minor release that you are packaging as a new MSI file rather than as an MSP (MSPs are recommended for smaller updates) then you would not be able to install alongside the current software, you would need to upgrade the existing instance using the recachereinstall flags as described in the documentation. This is what your customers would need to do as well, so it is a good thing to test. For clean installs in this case, you would need to go to another machine.

Host: Hem (Microsoft)

Q: The ExtractPatchXMLData function is new in the 3.0 version. How can I get the same information about a patch (Target version, Updated version,...) with Windows Installer 2.0

A: MsiExtractPatchXMLData API is available only on Windows Installer 3.0. If you need this information then you need to install Windows Installer 3.0. However, this information is already inside the MSP's summary information stream. Y=ou can view most of this information using Orca 3.0 as well.

Host: Chris (Microsoft)

Q: Will Orca 3.0 work on MSI 2.0?

A: Yes, but some functionality will be disabled. 3.0 style patches may not be viewable in the "patch viewing" mode, etc.

Host: KenWong (Microsoft)

Q: Many Microsoft and other vendor applications leave around boat loads of registry keys, folders, files and short cuts. Does version 3.0 offer anything that helps make an uninstall look like the application was never there?

A: Given that the install is Windows Insatller based, a component could be orphaned during uninstall if for example it is marked as permanent or shared between products. It really depends on the authoring of the package.

Host: Hem (Microsoft)

Q: Will the Intel x64 require different Template Summary Property than AMD64? Meaning if we want pure 64bit package, will will need a completely different package for Intel x64, AMD64 and Itanium 64?

A: That is feature work for Windows Installer 3.1. Windows Installer 3.1 will be part of Server 2003 SP1 release.

Moderator: Andy (Microsoft)

Thanks all for joining and thanks to our experts!

Host: Tyler (Microsoft)

I wanted to let everyone know of our upcoming Windows Installer chats. October's chat will be on October 12 at 11:00 AM and the topic will be "Using the Driver Install Frameworks with the Windows Installer" so if you are interested in installation of drivers using the Windows Installer, this chat is for you. November's chat will be on November 9 and the topic will be "Using WiX to author your Windows Installer packages" so if you have heard about WiX or are using WiX, this chat is for you.

Host: Tyler (Microsoft)

We look forward to seeing you all at future Windows Installer chats.

For further information on this topic please visit the following:

Newsgroups: microsoft.public.platformsdk.msi

Microsoft Windows Installer Transcripts: Read the <u>archive</u> of past MSI chats.

Website: Visit the Management Technologies Community Center site.

Website: Visit the Microsoft Windows Installer site.

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NEOHAPSIS ARCHIVES

LOCATION: Neohapsis / Archives / SecurityFocus-Microsoft / Message Index / Message #0004

RE: services running in windows domain (winXP clients)

From: Jim Masson (jmasson@exchange.microsoft.com)

Date: Wed Jan 05 2005 - 11:54:42 CST

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This is not really my area of expertise, but I did vaguely remember something like this from a past project, and was able to locate this article that might help explain what you are seeing.

http://www.microsoft.com/technet/prodtechnol/winxppro/maintain/rstrplcy.mspx

According to this article, there are some things that software restriction policies do not apply to, including processes that are started under the LOCAL SYSTEM account. Many services and task scheduler jobs fall into this category.

Scope of Software Restriction Policies
Software restriction policies do not apply to the following:

- * Drivers or other kernel mode software.
- * Any program run by the SYSTEM account.
- * Macros inside of Microsoft Office 2000 or Office XP documents.
- * Programs written for the common language runtime. (These programs use the Code Access Security Policy.)

Hope that helps.

-Jim

----Original Message-----

From: Frank Knobbe [mailto:frank@knobbe.us]

Sent: Tuesday, January 04, 2005 4:22 PM

To: Nicolas RUFF (listes)

Cc: focus-ms@securityfocus.com; Starks, Brad

Subject: Re: services running in windows domain (winXP clients)

On Fri, 2004-12-31 at 18:05 +0100, Nicolas RUFF (listes) wrote:

- >> The way I understand it, software restriction policies only work for
- > > applications that are called by the Windows explorer process. If

thev

- > > are called by any other process, then the restriction policy does not
- > > work.
- > [...]
- > You can check by yourself that SRPs apply to all processes :
- > Create a 'deny' rule on NOTEPAD.EXE
- > Launch GPUPDATE to update your policy
- > Try to launch NOTEPAD from inside CMD.EXE : it won't run
- >
- > Then I tried on the IIS system service (INETINFO.EXE) : the service DID
- > start despite the 'deny' rule ... Too bad. I think I will investigate
- > this further, but indeed SRP won't solve your particular problem.

Launching apps from cmd.exe is comparable to launching it from IE or Explorer -- in each case the programs is started by the user.

System services, however, are not. These are started by the SYSTEM. Perhaps a service might honor the policy if it is started under a user account (other than SYSTEM), but my past experience has been that it ignores the policy.

In short: Apps started from the GUI (Explorer, cmd.exe window, etc) will check the policy setting first. Apps started by the system as services, the scheduler, I believe, and other already started applications (spawning sub commands/scripts/batchfiles/etc) are not. I think the screen saver is also not checking the policy, if I remember right.

Would make for an interesting project -- to create a matrix of different launch methods and policy compliance results.

Regards, Frank	

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Senior Project - Elmo

An Application for Creating Interactive and Evolvable Web Sites

Senior Project: 1996-1997

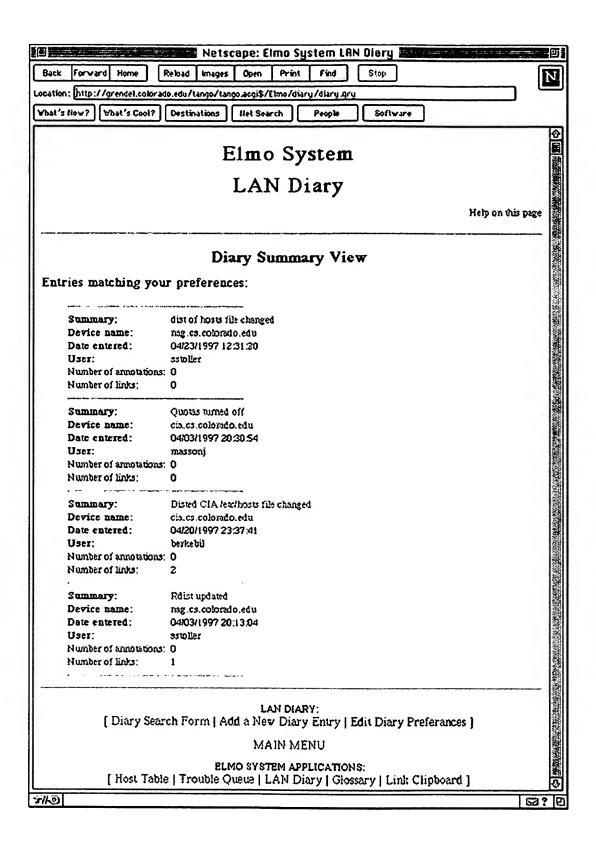
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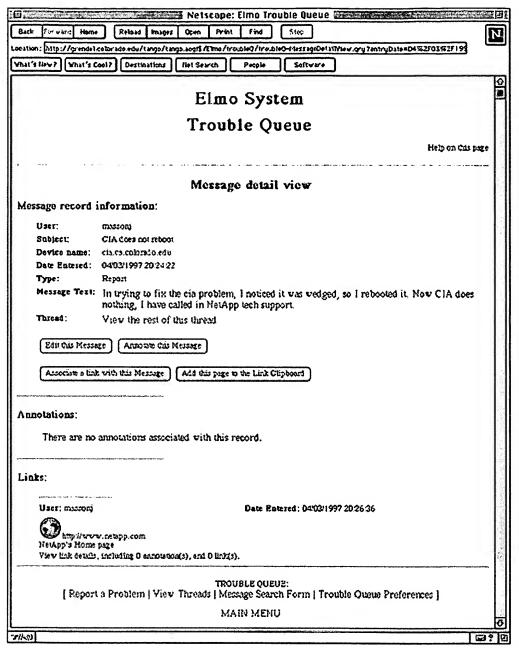
University of Colorado at Boulder

Center for LifeLong Learning and Design Boulder, CO

Most sites on the World Wide Web today are made up of static HTML pages that are maintained by a "webmaster." This website model is well suited for broadcasting unchanging information across the web to users, but is not well suited for presenting information tailored to a specific user need, or for allowing users to directly modify and extend the information contained in the site. One research project within the Center for LifeLong Learning & Design (L3D) attempts to transform the Web from a broadcast-oriented media into a collaborative media for constructing knowledge. This project aims to implement a new website model in which information content and hypertext links are stored as small pieces in a database, and then put together "on the fly" to create HTML pages. The goal is to support dynamic websites that are directly extensible by users without requiring HTML knowledge, deliver information tailored to the user's needs, and integrate many different types of content (such as email, newsgroups, and conventional web pages).

This project was developed as a concrete example of such a system. The Elmo System is a set of LAN management applications which help LAN administrators to better monitor their local area networks. A simple web-oriented interface makes Elmo easily available to any user who has access to a web browser. The five core applications of the Elmo suite are Host Table (tracks information pertaining to particular hosts and devices on the LAN), Trouble Queue (allows users and LAN administrators to record and maintain threaded discussions about problems on the network), LAN Diary (tracks actions taken on specific networks and devices), Glossary (a dynamic dictionary for LAN-related terms), and Link Clipboard (allows users to view, edit, and delete their links). In addition to these five applications, the Elmo System provides annotation (a system-wide mechanism which allows users to annotate entries in the system) and linking capabilities (a general mechanism that allows users to associate links with entries in the system). The project was developed using Tango and Butler SQL for a Macintosh environment.





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RE: Computer accounts in NTFS permissions

From: Jim Masson (jmasson@exchange.microsoft.com)

Date: Fri Feb 25 2005 - 10:49:33 CST

• Messages sorted by: [date] [thread] [subject] [author]

I'm not an expert here, but I do happen to recall the story on this particular question.

The basic rule is that when accessing local resources, LocalSystem and NetworkService use their well known SIDs (S-1-5-18 and S-1-5-20), just as you would expect. When going out over the network, processes running under those accounts use the computer's SID.

So, if you want a service running as Local System or Network Service on machine B to access a file share on machine A, you need to ensure that machine B's SID is granted access (or a group that machine B is in) to both the share (using the share ACL) and the underlying files using the NTFS ACLs. By default, all computer accounts in a domain are members of the "Authenticated Users" and "Domain Computers" security groups.

Security filtering in Group Policy for computer policies works using this mechanism - the policy processing code on the client (running as LocalSystem) goes and talks to the domain controller, and policies that the computer account is unable to see are automatically skipped.

You can read more in this article (just look for the LocalSystem and Network Service well known SIDs)

http://www.microsoft.com/resources/documentation/WindowsServ/2003/all/techref/en-us/Default.asp?url=/Resources/Documentation/windowsserv/2003/all/techref/en-us/w2k3tr_sids_how.asp

Cheers,

-Jim

----Original Message-----

From: Miroslaw Slawek Chorazy [mailto:mchorazy@depaul.edu]

Sent: Wednesday, February 23, 2005 2:24 PM

To: dschmidt@buddyrents.com; bkmlstsgohere@comcast.net

Cc: focus-ms@securityfocus.com

Subject: Re: Computer accounts in NTFS permissions

Marshall

>The computer account -- not System or some other account on the computer --

>isn't ever going to be accessing files (at least not in any examples I

>think of).

In an AD environment, the computer account will indeed be used during the startup process and will need appropriate permissions and rights associated with it to read AD Objects like GPOs and scripts. In some environments, the AD DNS dynamic name registration is also performed using the SID associated with the Computer.

slawek

>>> "Bruce K. Marshall" <bkmlstsgohere@comcast.net> 2/23/2005 14:23

Daniel,

The computer account -- not System or some other account on the computer --

isn't ever going to be accessing files (at least not in any examples I

think of). And permissions won't be enforced just because a user or

account happens to be operating from that computer. So, setting using

computer security principal in NTFS ACLs won't have any effect.

If a service on the computer is trying to access the file then you should be

able to set up NTFS ACLs using the appropriate account (System, Local Service, Network Service, etc.).

Bruce K. Marshall - bmarshall @ securityps.com Security PS - Kansas City

---- Original Message -----

From: "Daniel Schmidt" < dschmidt@ buddyrents.com>

To: <focus-ms@securityfocus.com>

Sent: Wednesday, February 23, 2005 9:32 AM Subject: Computer accounts in NTFS permissions

- > It is my understanding that computer accounts can be used as security
- > principals, but using them in a NTFS ACL seems to have no effect.
- > computer account authentication only authorize accesses from the SYSTEM
- > account? Can anyone point me toward some useful reading on the subject?

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Windows Installer and Group Policy

Posted October 21, 2002

Chat Date: October 1, 2002

Chat Participants:

- Ken Maybee, Tester
- Chris Gouge, Software Design Engineer
- Jim Masson, Program Manager
- Carolyn Napier, Software Design Engineer
- · Adam Edwards, Development Lead

Windows Installer and Group Policy

Host MS_Eric_S

Welcome to today's Chat. Our topic is Windows Installer and Group Policy. Questions, comments, and suggestions are welcome.

Host MS_Eric_S

The Input Room (below) is where you can enter questions for our Hosts today. We will read them and select questions to answer.

Host MS_Eric_S

The questions and answers will be posted in this room, the Reading Room.

Host MS_Eric_S

Please feel free to begin posting your questions in the room below. Please begin your questions with a **Q**: this will help us quickly identify the questions.

Host MS_Eric_S

We will make an effort to answer as many questions as we can. There may be times when a question may be asked that we do not have an immediate answer for or cannot get to. We encourage you to post any of these questions in the microsoft.public.platformsdk.msi newsgroup.

Host MS_Eric_S

Let's introduce our Hosts for today.

Host Guest_Ken_MS

Hi I am Ken Maybee. I am a tester in the Group Policy test team.

Host Guest_Chris_MS

Greetings! I'm Chris, a developer on the Windows Installer Team. I've been working on MSI for about four years, with my areas of focus uncluding custom actions, security, validation, source resolution, and overall architecture.

Host Guest_Jim_MS

Hi, my name is Jim Masson, and I'm a program manager here who has worked on IntelliMirror Software Installation, Group Policy, and MSI over the last few years.

Host Guest_Carolyn_MS

Hello, I'm Carolyn Napier. I have been a developer on the Windows Installer team for a little over three years, specializing in patching and upgrades, digital signatures, and overall architecture.

Host MS_Eric_S

Welcome everyone, let's get started!

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Host Guest Adam MS

Hello -- I'm Adam, a developer for Group Policy and it's software installation component.

Host Guest Jim MS

Q: Will Windows .NET come out with a "Forced Assigned" option (in addition to Assigned and Published)

Host Guest_Jim_MS

A: Yes, With Windows .NET server, you can set a user assigned application to fully install on logon. This will work with Windows XP and later clients.

Host Guest_Adam_MS

Q: Will there be a programatic interface to group policy to enable us to script the addition of MSI/MST to a policy

Host Guest_Adam_MS

A: This is definitely something we're considering for all group policy settings, not just software. We're thinking about these issues for a future release.

Host Guest_Jim_MS

Q: Why was the decision made at MS such that I cannot "PUBLISH to Computers" ?

Host Guest_Jim_MS

A: The idea was that we didn't want a regular (non-admin) user to have the ability to affect all users on the machine by installing a machine published application. Turns out that there is interest in this feature, but it didn't make it for .NET server L.

Host Guest_Adam_MS

Q: Does the "Deployment Count" designation (in the Advanced Deployment Options) actually work in .NET now?

Host Guest_Adam_MS

A: Not sure what you feel currently is not working. From an end user standpoint, the number displayed in the user interface will let you know how many times the "Redeploy" action has occurred that application.

Host Guest_Jim_MS

Q: Will MS provide documentation about the attributes of a "packageRegistration" object, so that one can create software packages in a GPO programmatically?

Host Guest_Jim_MS

A: Yes, we will provide this documentation on MSDN with Windows .NET server.

Host Guest_Carolyn_MS

Q: What new Windows Installer POLICIES are available inside Win .NET server?

Host Guest_Carolyn_MS

A: There aren't any new specific policies that were added in .NET server for the Windows Installer. MSI 2.0 (which released with Windows XP) added the new DisableUserInstalls and LimitSystemRestoreCheckpointing policies.

Host Guest_Carolyn_MS

A: Only DisableUserInstalls is applicable to .NET Server as system restore is not included in .NET server. There were some policy default value changes in .NET Server (eg. DisableMsi and TransformsSecure).

Host Guest_Adam_MS

Q: If I delete the GPO, and hence, "strand" the application, is there any way to "unstrand" the application?

Host Guest_Adam_MS

A: Unfortunately, no. If the application was configured to remain on clients after the gpo went out of scope, it will do so until manually uninstalled on the client. If you restore the GPO with a tool such as GPMC, you may be able to rectify the situation administratively.

Host Guest_Chris_MS

Q: Is WinInstall LE still included with Win .NET Server? Or something else?

Host Guest_Chris_MS

A: WinInstall LE is not a part of .NET Server.

Host Guest_Ken_MS

Q: can someone define GPO (I currently use InstallShield)

Host Guest_Ken_MS

A: A GPO is a Group Policy Object.

Host Guest_Jim_MS

Q: Does Win .NET help with "protecting" installs.. ie: You assign to John, but Sally can run John's assigned programs (after installed)

Host Guest_Jim_MS

A: Yes and No. Assuming that the app requires COM registration, or it explicitly interacts with the installer using our API, it will generally not work for another user other than one it's assigned to. Unfortunately, we don't really have anything that provides an easy hard block, short of locking down the app binaries using an ACL.

Host Guest_Adam_MS

Q: Will .NET help with figuring out how many licenses are being used (with Deployment Count) or otherwise?

Host Guest_Adam_MS

A: There are currently no features for integrating Group Policy with licensing in Windows .Net Server -- this has certainly been requested by customers. The deployment count only tells you how many times the administrator chose to "redeploy" the application, it doesn't tell you how many clients the software has actually been installed on.

Host Guest Chris MS

Q: Are there any plans for Microsoft to start using Windows Installer for all it's own products? E.g. MSN Messenger, IE, EXchange, etc

Host Guest_Chris MS

A: Windows Installer tries to ensure that we provide the functionality our customers need to create their setups. Its at the discretion of application teams, internal or external to MS, to evaluate MSI and decide whether it meets their needs.

Host Guest_Chris_MS

A: It helps if customers request the various applications from the various vendors as MSIs.

Host Guest_Adam_MS

Q: Can one change the lifetime of an ".aas" file (from 1 year) after a software package object has been removed?

Host Guest_Adam_MS

A: It is best to let the group policy snapin manage the lifetime of this state. Unfortunately, this is currently not configurable in gpedit, and in general, editing gpo's outside of gpedit is not advisable.

Host Guest_Jim_MS

Q: Adam cd seems to be asking the same question that I have asked. Can you provide more detail on the plans for a programatic interface

Host Guest_Jim_MS

A: There are a few ways we are providing programmatic access to policy.

Host Guest_Jim_MS

A: The first is that we are shipping a tool with Windows .NET server called the Group Policy Management Console,

that (among many other things) provides programmatic and scripted access to many GP functions.

Host Guest_Jim_MS

A: Unfortunately, GPMC doesn't have nice interfaces for scripting the contents of a GPO (i.e. the settings). For that, we will have some documentation of the data that we sue and store in the AD, but we don't have nice APIs on top of it.

Host MS_Eric_S

Hello. For those just joining the chat - Our topic is Windows Installer and Group Policy. Questions, comments and suggestions are welcome.

Host Guest Adam MS

Q: Adam cd seems to be asking the same question that I have asked. Can you provide more detail on the plans for a programatic interface

Host Guest_Adam_MS

A: I'd like to provide more details, but at this stage we're not in the position to comment on pre-release products. I can tell you that yours is a very common request and one of the biggest shortcomings for all of group policy.

Host Guest_Adam_MS

A: Your question on this is helpful data for us in making our plans for the future.

Host Guest_Adam_MS

A: In the meantime, GPMC should provide some ability to do this using it's import of an entire gpo capability (you could import a "template" of applications programmatically).

Host Guest_Chris_MS

Q: So to whom at Microsoft do we request that you distribute your applications as MSI packages?

Host Guest_Chris_MS

A: Ideally, you should provide feedback to the application team directly via their feedback mechanism. If you're unsure of how to contact the product's team, you can send your request to

http://www.microsoft.com/mswish

Host Guest_Carolyn_MS

Q: does the uninstallation of an app require that the PC has access to the original source, rather than using the cached MSI for uninstall instructions?

Host Guest_Carolyn_MS

A: In general, an application should not require access to the original source on uninstallation. The Windows Installer does not normally require access to the original source during uninstalls.

Host Guest_Carolyn_MS

A: However, applications may be authored such that they require access to the original source (this is outside of the control of the Installer). If an application setup includes the ResolveSource action which isn't conditionalized appropriately or uses a run from source custom action type, then the original source may be required.

Additionally, if the cached package is missing, then MSI will need to access to the source in order to perform the uninstall.

Host Guest_Carolyn_MS

A: In the end, setup authors should strive to author their setup packages so that unnecessary source accesses are eliminated.

Host Guest_Jim_MS

Q: Jim_MS - docs on the data used for policies, without nice APIs. But some API, nice or not ? covering pgm-atic mgmt of policy ? When ?

Host Guest_Jim_MS

A: Unfortunately, we don't have anything reasonable for the settings within a GPO in the .NET server timeframe. We have received a bunch of feedback on this, and we know it's needed, but I don't have a timeframe I can promise.

Host Guest_Jim_MS

A: In the mean time, using GPMC with templates is about the best I can recommend. More on GPMC can be found at: http://www.microsoft.com/windows.netserver/gpmc/default.mspx

Host Guest_Adam_MS

Q: Are there API's to distinguish whether a software package came via a GPO or installed manually on a client?

Host Guest_Adam_MS

A: Using Group Policy's RSoP (Resultant Set of Policy), the set of applications installed on a client from a gpo can be enumerated.

Host Guest_Chris_MS

Q: Will WI support/use DCOM in future, to allow remote installation and configuration of MSI packages?

Host Guest_Chris_MS

A: Windows Installer is a software installation technology. While MSI integrates closely with a variety of targeting and software distribution systems, this is not functionality that it provides natively.

Host Guest_Chris_MS

A: You will need to initiate the install on the clients using the technology of your choice.

Host Guest_Jim_MS

Q: sorry I am confused now - are you saying you will not provide documentation to enable us to programatically edit GPO's for software distribution? This would be a huge limitation, we can code around that lack of an API ...

Host Guest_Jim_MS

A: To clarify - we will provide docs on the structure of the data in AS and on SysVol, but we are not providing an API to manage it directly in the .NET server timeframe.

Host Guest_Adam_MS

Q: Are there any plans to change the nature of how GP uses ".aas" files to advertise software?

Host Guest_Adam_MS

A: There are known limitations with the deployment time vs. application time state of GP deployed applications. This is something we'd want to address in the future, whether through the use of .aas files or some other mechanism.

Host Guest_Chris_MS

Q: Are there API's to distinguish whether a software package came via a GPO or installed manually on a client?

Host Guest_Chris_MS

A: Followup Answer from a slightly different perspective, MSI itself provides a MsiIsProductElevated() API which can be used on the client to determine whether a product is admin-managed or not, but it does not necessarily indicate that the install currenly falls within the control of any particular distribution technology.

Host Guest_Carolyn_MS

Q: When will an action with sequence number "-4" get run?

Host Guest_Carolyn_MS

A: Negative sequence numbers are reserved for exit actions. -1 is the Exit Dialog. -2 is the UserExit Dialog. -3 is the FatalError dialog. -4 is executed when the installation is suspended.

Host Guest_Adam_MS

Q: What is an .aas file?

Host Guest_Adam_MS

A: These are just files that contain lightweight information about an application (e.g. shortcuts, source paths) used by group policy to bootstrap an application onto a client machine. This is an implementation detail that could change in future windows releases, so it is best not to rely on its structure or existence.

Host Guest_Jim_MS

Q: Why does MS not provide more documentation on creating admin templates to aide administration. eg, provide reg locations on how to tweak settings that admins need.

Host Guest Jim MS

A: In general, just manipulating arbitrary registry keys doesn't get you the best experience with policy, as settings that are not designed to be policies will generally overwrite user preferences, and tattoo themselves on the machine, even when the policy no-longer applies.

Host Guest_Jim_MS

A: As a result, we focus most of our efforts on getting OS components and apps to support proper policy settings, and with Windows .NET server we have close to 1000 such settings.

Host Guest_Jim_MS

Is there a particular setting you want to manage that we don't specify? That would be useful feedback.

Host Guest_Adam_MS

Q: One limitation of MSI & GP is the inability to specify a specific log file location for an assigned/published application. Any plans to alter this behavior?

Host Guest_Adam_MS

A: Group Policy does not currently have this capability in any Windows release, so we can certainly take this suggestion for per-application diagnostic capabilities as a suggestion for the future. Currently, it is possible to globally enable the creation of log files through group policy, but this does not allow specification of the log file locations.

Host Guest_Carolyn_MS

Q: I am interested in finding more about the direction Windows Installer is heading. For example, will the MSI schema be expanded upon to enable handling driver installation eliminating the need for .INF files?

Host Guest_Carolyn_MS

A: Support for installation of drivers is definitely one feature that Windows Installer is considering in the future.

Host Guest_Carolyn_MS

A: If you would like to make your feature request known, I'd suggest using

http://www.microsoft.com/mswish.

Host Guest_Chris_MS

Q: Will the next version of WI, change the feature, that an installation in the root of a drive automatically installs on the one with most space, and insted try c:?

Host Guest_Chris_MS

A: This is unlikely to change. For one thing, in some locations, drive C: is not a hard-disk drive. If you would like to specify a specific target location, you can do this by setting the TARGETDIR property or any property from the directory table.

Host Guest_Jim_MS

Q: A bluesky future question, are there any plans to migrate sysvol GPO files to an XML format?

Host Guest_Jim_MS

A: We are considering a number of different options for the future storage of policy on the server. Unfortunately, there isn't anything that we can speak about publically yet on that front.

Host Guest_Jim_MS

Q: Jim_MS. To name a few, System Restore settings (time to keep and how often), IRP Stack size, Disabling Dyn. DNS, removing RAS checkbox from Gina, Event viewer settings, crash control settings, additional IE lockdowns, etc.

Host Guest_Jim_MS

A: Thanks, I'll pass those along to the relevant folks.

Host Guest_Adam_MS

Q: Are there plans to have WMI filters per software package in a GPO? I want to create a GPO with multiple packages with different WMI Filters for each package (based on h/w parameters). How can I get around this?

Host Guest_Adam_MS

A: For the future, we are looking at advanced ways to target individual settings such as deployed applications. With our current infrastructure, you'd need to create multiple gpo's that divided your applications into different classes based on the hardware needs that you can express in the gpo's wmi filter.

Host Guest_Carolyn_MS

Q: Regarding an action with a "-4" sequence number. I'm guess I'm not clear on defining a "suspended" installation. EG, if one does not select any push buttons on an error dialog, is this a "suspended" installation?

Host Guest_Carolyn_MS

A: A "suspended" install would be an installation that was interrupted before it could be completed. For example, this might be a power loss during an installation.

Host Guest_Carolyn_MS

A: Additionally, you could have a "suspended" install if your response to a ForceReboot reboot is to choose to reboot later.

Host Guest_Chris_MS

Q: will there in the future be a policy, that turns on elevatedpriviledges during installation, and removes it when the installation has ended, so that a user does not have to be admin when installing it? Else, does Microsoft provide directions?

Host Guest_Chris_MS

A: MSI will never allow applications to tell the system "elevate me" without some form of administrator approval and control system. This would be a huge security hole. Currently administrators can provide this approval\control system by advertising the software ahead of time or by using some software distribution technology to pre-approve the software. The other way administrators can allow limited users to install software is to set the AlwaysInstallElevated policy, which tells MSI to alway install with elevated privileges. This policy essentially turns of security on the machine and should never be used in any form of secure environment. More information can be found in the MSI documentation.

Host Guest_Jim_MS

Q: will the next generation of .NET server GPO distributions take use of the BITS service?

Host Guest_Jim MS

A: It's not something we use today, but BITS is something we are looking at, but any such improvement would be after .NET server.

Host Guest_Ken_MS

Q: Imported settings (ex. IE Sites) seem flakey when pushed via GP - any tips/tricks?

Host Guest_Ken_MS

A: Could you provide a example of the flakey items?

Host Guest_Jim_MS

Q: Any plans to incorporate deployment via Group Policy a requirement in Windows 2000/XP logo compliance? A Challenge of administrators is to "appropriately" configure the feature states to ensure that an MSI will advertise/install via GP properly.

Host Guest Jim MS

A: Good suguestion, I'll pass that along to the proper folks.

Host Guest_Carolyn_MS

Q: Continued question about targetdir. Would it be wrong to suggest some kind of intelligence in WI, so that it would look at the drive where windows is installed, or programfiles.

Host Guest_Carolyn_MS

It is more likely that this would be a better drive to install insted?

Host Guest_Carolyn_MS

A: You can use the predefined directory table properties like ProgramFilesFolder to author your installation package so that the resolution of TARGETDIR resolves to the Program Files folder location.

Host Guest_Carolyn_MS

A: MSI has lots of logic to allow you to create a Directory table that will resolve to the location you prefer.

Host Guest_Chris_MS

Q: Will WI, in future, support error handling (or return code handling) in Custom Actions? We install MS hotfixes using MSI (to elevate privilages), but some hotfixes return "reboot" return code, which MSI thinks is failure.

Host Guest_Chris_MS

A: Various types of custom actions have different levels of functionality as far as handling return codes and interacting with the MSI installation. Currently, executables have a success\fail return-code interpretation, which is the most limited type of interpretation. We will investigate your suggestion for the next version, but it is too early in the planning process to say for certain what the future holds for executable custom actions.

Host Guest_Adam_MS

Q: Some of our sites get the imported settings others do not - RSOP shows that GP made it to the workstations

Host Guest_Adam_MS

A: It sounds like you're saying that rsop shows the gpo settings has having applied, but they do not seem to have actually applied. Such a case could only be a bug -- I would double-check the group policy newsgroup to try to get detailed assistance, and if it still seems like a bug, a support call is probably the next place to go.

Host Guest_Carolyn_MS

Q: What is the best way to detect installation of other software within an MSI pacakage? For eg., if IIS is installed, then created Virtual Directory via this script.

Host Guest_Carolyn_MS

A: One option is to make use of AppSearch action and the Signature, RegLocator, DrLocator, IniLocator, and CompLocator tables.

Host Guest_Carolyn_MS

A: If AppSearch finds the matching signature, then it will set the property you specified in the AppSearch table for the Signature.

Host Guest_Carolyn_MS

A: You can then conditionalize your action and/or component on the property. The other option is to use a custom action to perform the detection if AppSearch can't get you want you want.

Host Guest_Chris_MS

Q: Does WI support (or easily support) installation completion after reboot? Or do we need to build an external program that runs or runsonce at login?

Host Guest_Chris_MS

A: Yes, MSI has support for installations that need to reboot in the middle of the install. MSI will attempt to restart the installation, however the exact behavior varies based on whether the same user or a different user logs on after the reboot. The MSI can check the AFTERREBOOT property to determine if the install is post-reboot. More information can be found in the documentation.

Host Guest_Jim_MS

Q: The tool being used for installing MS SDK's is very cool

(http://www.microsoft.com/msdownload/platformsdk/sdkupdate/) is this a feature in windows installer. If not does microsoft ever plan to market this installer?

Host Guest_Jim_MS

A: That is actually an ActiveX control, that then manages the installation and updating of multiple, smaller MSI packages. It's currently pretty specific to the SDK, and I'm not aware of any plans to publish it or market it.

Host Guest Carolyn MS

Q: Regarding AppSearch, it would be good to have a generic "IsProductInstalled (GUID)" function...

Host Guest_Carolyn_MS

A: You can partially accomplish this with the CompLocator table which will allow you to search for a particular component ID.

Host Guest_Carolyn_MS

A: If the component was unique for the product, then you could detect your product that way. Also for first-time installations, the FindRelatedProducts action can be used together with the Upgrade table to detect products.

Host Guest_Carolyn_MS

A: You can use the msidbUpgradeAttributesOnlyDetect attribute to just perform detection. You don't have to use the Upgrade table solely for removal of pre-existing MSI products.

Host Guest_Adam_MS

Q: How does a GP define the source of an MSI when used to advertise (assign or publish) an application?

Host Guest_Adam_MS

A: Group Policy uses the file system path that the user points to in the gpedit ui when deploying the application.

Host Guest Carolyn MS

Q: re: ALLUSERS + Per User data files + Uninstall. If you install a package Per-Machine, and that package has Per User data, generally the application or the W.I. shortcut will create initial data for each user as required.

Host Guest Carolyn MS

A: yes, this is the way Windows Installer works and it is a complicated issue because in some cases this is desired behavior. For example, user configuration settings may need to remain after an install.

Host Guest_Carolyn_MS

A: Additionally in roaming user scenarios, uninstallation of the product by one user should not affect the other user and remove its settings.

Host Guest_Carolyn_MS

A: Additionally we do provide validators that help detect cases where the package author is mixing per-user and per-machine data. This can often help minimize the impact of this.

Host Guest_Jim_MS

Q: Are there any known issues re: GP and 64-bit installer on (Win2KAS 64bit, Xp 64, .NET Svr 64)? Links, keywords would be helpful.

Host Guest_Jim_MS

A: There is explicit support in both WI, and in the GP Software Installation feature for handling 64 bit packages

(and 32 bit packages on 64 bit platforms) in .NET server. In particular, you can allow or prevent 32 bit packages form being visible to your 64 bit systems.

Host Guest_Jim_MS

A: The .NET server version of the software isntallation whitepaper will cover this

Host Guest_Adam_MS

Q: re: MSI source: does the GP use UNC or can it use drive letters? For a single domain environment with multiple sites and software distribution servers, you can see that drive letters are important.

Host Guest_Adam_MS

A: Group Policy will honor a drive letter (i.e. you can browse to y:\apps in the gpedit ui and the path will start with y:), but bear in mind that driver letters may be mapped differently for different users, and Windows Installer may have issues accessing the drive letter. This is why gpedit gives a warning in this case -- I would advise against it. Instead, I would recommend using unc paths with dfs, will do the right thing in terms of sites and locality.

Host Guest_Adam_MS

Q: Does the GP Software Installation show the "bitness" of the package or should the name of the product reflect that?

Host Guest_Adam_MS

A: Yes, it does. It is shown in the property pages, and also can be shown in the result pane if you choose "add / remove columns" in gpedit and add the architecture column.

Host MS_Eric_S

Thanks for joining us today and thanks for the questions. It's time for us to go now. You'll be able to find the transcript of this chat soon on the MSDN Web site at http://msdn.microsoft.com/chats/recent.asp. Please see the chats schedule at http://msdn.microsoft.com/chats for upcoming topics.

Host MS_Eric_S

We also encourage you to join us in the MSI newsgroup at

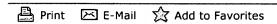
news://msnews.microsoft.com/microsoft.public.platformsdk.msi.

Host MS_Eric_S

Note that we have another MSI chat coming up on Nov 6th, on Custom Actions. See

http://msdn.microsoft.com/chats for more info and for links for reminders for that chat. Hope to see you there!

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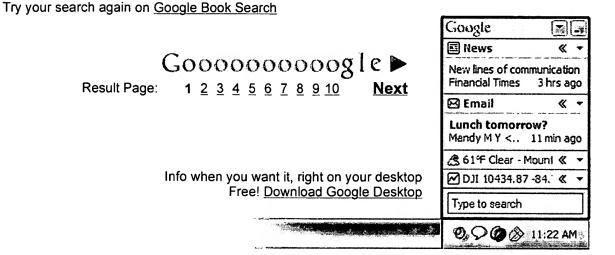
Network Security Archives

SecurityFocus Microsoft Newsletter #228, Marc Fossi, 19:33 ... Re: Password Protected

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